

The Future of Visual DCT

EPICS Collaboration 2006
Argonne National Laboratory

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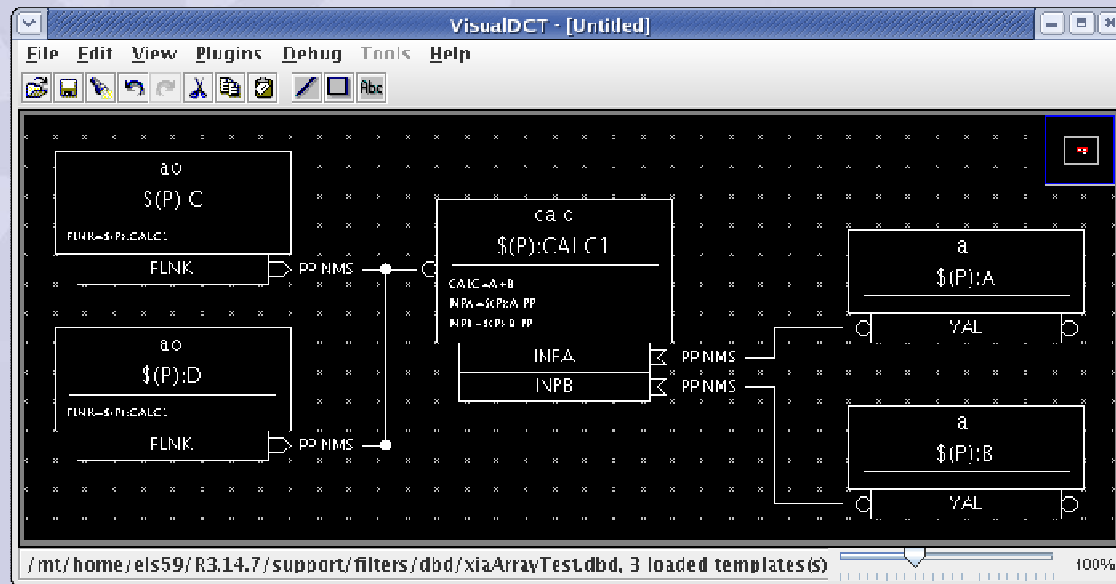


Who does what?

- I am the new DLS point of contact for VDCT
- Core development done by Cosylab
- Would like other people to provide extensions
- DLS co-ordinating funding, future directions
- Need input from the EPICS community
 - Please fill in the VDCT usage survey
 - Results will be posted on tech-talk



Background



- Open source database configuration tool
- Designed as a CapFast replacement
- Written in Java
- Preserves db file format

* <http://visualdct.cosylab.com> *

Inspector - \$(P):CALC1

\$(P):CALC1 (calc)

Group Alphabetical DRD Order

GUI_DISPLAY		GUI_DISP_AY
EGU		min
PREC		
HOPR		
LOPR		
ADEL		
MDEL		
GUI_CALC		GUI_CALC
CALC		A+B
INPA		\$(P):A PP
INPB		\$(P):B PP
INPC		
INPD		
INPE		
INPF		
INPG		
INPH		

Comment

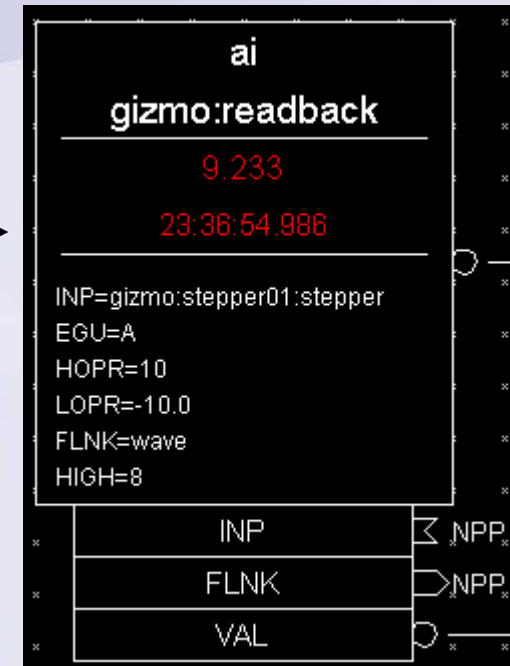
This is a calculation record

Display Precision Frozen ☐

Center object

Current status

- Currently available features include:
 - Support for hierarchical databases
 - Plug-in framework for extensibility
 - Debug plug-in (to talk to live databases) →
 - Alarm handler and archiver plug-ins
- “Package F” released December 2005:
 - Major usability enhancements and bug fixes
 - Much improved wiring
 - Support for importing borders
 - and more



* http://www.aps.anl.gov/epics/wiki/index.php/VDCT_Status_Page *



The future: Option 1

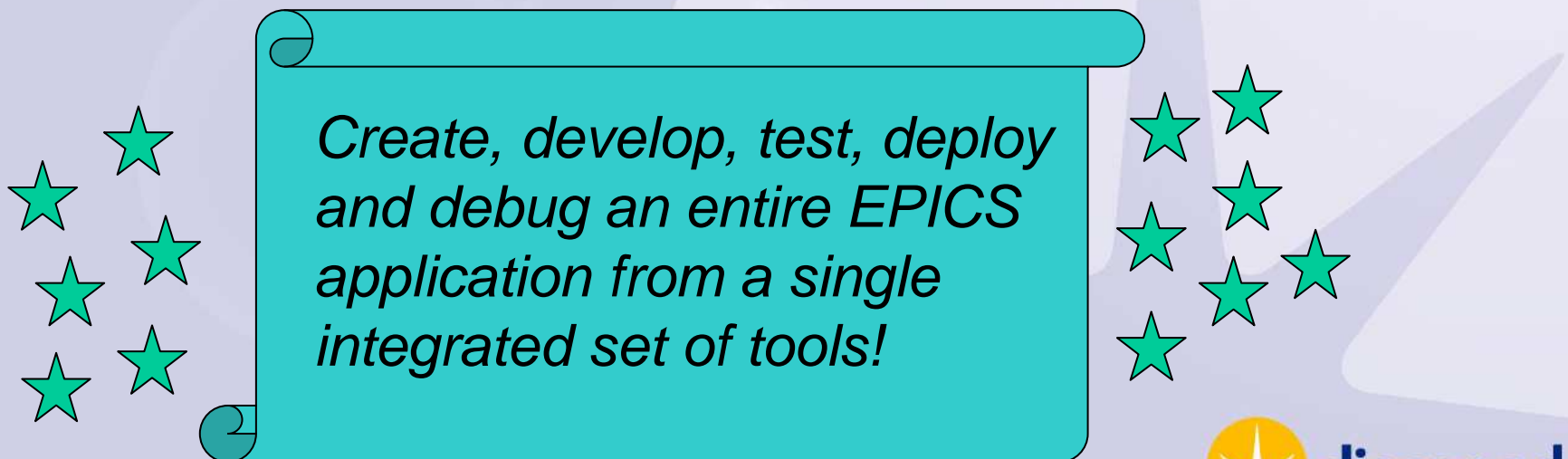
- Continue with 'standalone' developments:
 - Enhancements to the debug plug-in
 - 'Spreadsheet mode' editing
 - Intelligent linking
 - Support for editing the DB/DBD include path
 - Colour coding
 - Even better wire positioning
 - Improved printing
 - More comprehensive documentation
 - Relational database integration

OR.....



The future: Option 2

- Integrate with Control System Studio in Eclipse:
 - All of the option 1 improvements but within the same environment as the EPICS IDE
 - The vision:



*Create, develop, test, deploy
and debug an entire EPICS
application from a single
integrated set of tools!*

Why use Eclipse?

- ‘Look and feel’ already defined – easy for several labs to contribute plug-ins that fit together seamlessly
- Runs on a wide range of Operating Systems
- Flexible and extensible – only install functionality you need
- A lot of useful code already exists (GEF for wiring editor, EMF...)
- Integration with source code control systems comes for free
- Designed for ‘multiple personalities’:
 - Database design perspective
 - Database test perspective
 - ... only limit is your imagination!

** <http://www.eclipse.org> **



Ideas for a new VDCT in CSS

- Extensible record palette
 - Linked to EPICS documentation
 - Groups records into categories
- Macro subst. file editor
- EPICS tutorials
 - e.g. Walking through process of creating a new template
- Design pattern view
 - Support for encapsulating design patterns from existing databases and re-using them
 - Integrated with an SNL editor
- DB hierarchy tree view
 - To visualise db hierarchies
- Design checker
 - Does my database conform to lab standards?
 - Using Eclipse 'problems' view
- Test plug-in
 - e.g. $X.VAL \leq Y.VAL$
 - Extension to graphical editor and debug plug-in: failing records highlighted at runtime



What next...

- Cosylab currently undertaking initial design / feasibility study on integrating VDCT into Eclipse
 - Main issue is suitability of GEF for the graphical editor
- BUT nothing will happen without funding!
 - Combine with maintenance support contract for other tools?
 - Initial proposal: £20k from 5 labs
 - Remember: an improved database configuration tool will increase productivity
 - Any thoughts / ideas...?

Thank you for listening!

Please send any ideas or questions to:
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